



COLORADO SPRINGS,
COLORADO

MARCH 1989

PIKES PEAK RADIO AMATEUR ASSOCIATION, INC.

P.O. Box 16521
Colorado Springs, CO 80935

FIRST CLASS MAIL

NEW MEETING TIME

7:00 P.M.



Ø BEAT



P.P.R.A.A. DIRECTORS

PRESIDENT	Keith Goobie NYØT 5335 Coneflower Lane 80917	637-1525
V. PRESIDENT	*Rick Kile WB7THT 4922 Crestwood Drive 80918	599-7665
SECRETARY	Al Vrooman NØCMW 1341 Diana Ln. 80909	473-1080
TREASURER	*Ron Deutsch NKØP 4305 Ridge Lane 80918	593-8352
Board Member	Bud Libengood NØDDF 99 Old Broadmoor Rd. 80906	475-0537
Board Member	Bdale Garbee N3EUA Black Forest	495-0091
Board Member	*Doug Bower NØHJT 19770 Top O' The Moor Monument 80132	488-0559
Board Member	*Max Stafford KDØEL P.O. Box 35 Palmer Lake 80133	488-9289

* denotes the first year of a two-year term.

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., P.O. Box 16521, Colorado Springs, Colorado 80935. Cost is 50¢ per month for non-members or a \$4.00 per year subscription. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of each month at the Hewlett-Packard facility, at the intersection of Lexington and Union, at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Keith Goobie NYØT, 5335 Coneflower Ln., Colorado Springs, CO 80917 637-1525

MESSAGE FROM THE PRESIDENT

It was not too long ago in a Christmas message that I stated how proud I was of the Club membership for the way in which they were willing to accept responsibility and volunteer to organize the different Club activities. Well, it seems that I may have been shortsighted, maybe even foolhardy in my comments.... There are a number of upcoming activities/events that the club members will have to organize, yet the number of people who have stepped forward to date has been minimal.

I certainly do not expect (and I am sure that you would not as well) to have the same people volunteer to organize the same events each year. And I think that we should be getting away from the image where it is perceived that same 10% organize all the activities of the Club. For awhile around the Nov-Dec timeframe more club members were stepping forward to get involved. Now it seems that they are starting to withdraw.

I am certainly grateful for those who have volunteered in the past, but I realize (and you must as well) that they get tired of doing the same events over and over again. If we do not have other people to step forward and take their place, then the Board will ultimately have to cancel some of the annual events for which the Club has received many plaudits. As an example, what would you say if the Club did not have anyone step forward to organize the annual Swapfest and it was decided that it would be cancelled???

You certainly do not need any great experience to do any of these activities!!!!

Right now, the Club needs people to organize or support the following events or activities:

1. Be in charge of Selling the Raffle tickets for the Swapfest Prize. See Rick WB7THT for details.
2. Someone is needed to organize the Club Picnic to be held in August. Contact any Board member.
3. Head an effort to store and re-vitalize the Club assets - trailers, radica, etc.

This is only a partial list, but if you feel that you don't want to take on any of these because you may make mistakes - you are not alone! Others before have made mistakes, but they have learned from their mistakes and guide others later. Also there is a large number of previous organizers who are certainly willing to lend a hand so that you will not be doing this alone!

I urge the membership of the Club to become more involved in the running of the different Club activities. You will find it a rewarding experience and you will benefit from the chance of getting to know more of the Club membership.

Keith NYØT

MONTHLY CLUB MEETING

The next regularly scheduled meeting of the Pikes Peak Radio Amateur Association will be held at the Hewlett Packard facility at the intersection of Union and Lexington Boulevards. Detailed directions may be obtained from any Board member. Please note that the meeting time of 7:00 pm vice 7:30 pm. This months meeting will be on 8 March 1989.

This month our guest speaker will be General Royer from the Air Force Academy who will address the club on Over the Horizon Backscatter Radar. This is the same type of radar system that is often called the "Woodpecker" and the Russians are currently using these type of systems which are often heard on the amateur frequencies.

"THE VIEW FROM THE PEAK"

by George Hinds, N8CIX/0

CELLULAR TELEPHONES A BOOMING INDUSTRY...

Portable and hand-held phones are making earlier "mobile" phones fall behind in sales. Coming down in cost and size, the hand-held cellular phone is becoming tops on many wish-lists for Americans. With sales booming, more cellular phone capacity will be required. Some comments have appeared in amateur newsletters that cellular growth could be the next threat to ham radio frequencies. Another interesting fact: cellular car phones are proving to be of greater public service value for highway emergency reporting than either CB or amateur radio --

AMATEURS ALLEGE FRAUD THROUGH MAIL ORDER BY THE "NEW" DENTRON RADIO COMPANY AND THE ATLAS RADIO COMPANY...

An article in the 2/1/89 issue of "WSXI Report" tells of numerous amateurs having been defrauded in mail orders placed with the above companies. Atlas advertisements appeared in the November and December issues of "73 Magazine", and for Dentron in Ham Radio Magazine.

Michael D. Harrison, WB2PTI, alias John McNamara, alias Mike Hanson, was identified as the person placing the advertisements and was arrested on January 26 by postal authorities for mail and wire fraud.

Most victims ordered the Uniden 2510 rig for 10 meters for \$219.95; others sent checks for as much as \$3,000 for radios but received nothing in return. In January over 60 complaints had been filed.

Any amateur who believes he has been defrauded by "Harrison, McNamara, Hanson" d/b/a as Atlas or the "new" Dentron firm should file a complaint to: Martin J Biegeleman, Postal Inspector, Box 160, Hicksville, NY 11802-1260. Include a detailed statement of facts, date and magazine where the ad was seen, what was ordered, copy of the front and back of the check or money order and state if the U.S. Mail was used, was any merchandise delivered, what efforts were made to contact the advertiser, what response was received and any other pertinent facts. Send copy of advertisements, letters, receipts, etc.

WOULD YOU TRUST YOUR LIFE (OR YOUR RADIO COMMUNICATIONS) TO A COMPUTER?

Ever since I made the decision, about 7 years ago, to move from a typewriter to a computer/word processor, there have been times too numerous to recall when I've wondered about my sanity at the time of the decision. During the 60's while flying for a midwest air charter service, I could maintain control

at night in weather under IFR without any qualms whatsoever, now, faced with this infernal machine and its unwinking eye, I find myself at times afraid to make a decision to strike a key for fear that everything on the screen will go away into that never-never land where immortal (hopefully, at least) words go when the system "crashes" never to be recovered.

I think my real hero now is the salesman at the computer store who, when I all too often sneak in the door to ashamedly admit my ignorance and fear of self-destructing with the machine he sold me, can calmly sit down and do with a devil-may-care attitude the control commands that I in abject fear drew back from attempting. With the purchase of a "hard disk" computer, and knowing the vast amounts of information stored thereon, my fear of wiping everything out with a single keystroke intensified.

Sometimes it talks back to me - I swear it's saying "dummy" in computerese. How is it that a machine can sneer at its operator? Once you've stored a few million "bits" in it, from that point on the darn thing has you typing on tiptoes.

I've been trying to convince myself to get on packet radio. But that demands a computer and so once again makes you a captive of the system. Computers and automobiles have one characteristic in common: they both can come crashing to a stop at the most unexpected and inopportune times. Usually late at night. Always when you're facing a deadline. Never when the computer store is open. Time to go back to the typewriter? No-o-o.

But maybe a couple of tin cans linked with a string...

Oh, what the heck -- guess I'll start looking at packet gear soon -- what's a few more patch cords and LBD's when you've gone this far. I can yell "Help" as loudly as the next guy, waiting for a response is what may get me down...

WELL-KNOWN TELLER COUNTY AMATEUR NOW A "SILENT KEY"

John Felix, K0SLN, a long-time resident of rural Woodland Park and member of the Mountain Amateur Radio Club there, passed away at his home Sunday, Feb. 19. John was 64 and had long been active in MARC, teaching amateur radio classes and participating in Field Day regularly. He was also active in the Lions, in CPR training and at one time in search and rescue and a member of the AdAmAn Club who provided communications to the annual winter climb of Pikes Peak. John was a retiree from Civil Service at the USAFA and a veteran of World War III, serving in the Army Air Corps and the Army Reserves. He is survived by his wife, Barbara - KA0NWZ, five children and thirteen grandchildren. Burial was in Woodland Park on Saturday, February 25.

73, George Hinds, N8CIX/0

IF YOU CAN'T DAZZLE THEM WITH BRILLIANCE

BAFFLE THEM WITH HAM RADIO !!

On February 16th, four of our group presented a program on Ham Radio to the Rocky Mountain Chapter of the Armed Forces Communications and Electronics Association (AFCEA). Rick, WB7THT, was the main speaker, and presented a comprehensive talk on the hobby which covered history, public service, licensing requirements, and the many aspects to include satellite operations. As part of the main talk, Harvey, W1JU, demonstrated two meter repeaters with the aid of the "97" machine. A definite high point was when Harvey used his walkie to dial up the General Officer's cellular phone, which was at the head table. Following the talk, Keith (NY0T) and Rick (KD0SU) along with THT and JU demonstrated the equipment which they had set up. SU and Keith sent packet messages back and forth. THT had his RTTY station set up and even managed to work a YU. JU worked the HF station on 10 meter FM, and made quite a few contacts, including the Clarion's PA system. Rave reviews followed the demo, and ham radio gained great notoriety.

Harvey W1JU



Harvey W1JU demonstrating how contacts are made on the 10 and 15 meter bands. All contacts were made using a vertical antenna attached to the back of Rick's KD0SU car. Harvey was even reported to have worked the hotel's PA system.



Keith NY0T is giving an explanation of how packet radio can be used to set up virtual circuit connections.



Rick KD0SU is operating a portable packet station all from one battery cell (HT, TNC, Laptop)



Rick WB7THT is operating an RTTY station with a satellite tracking demo going in the background. He even worked a YU on 15m RTTY with a vertical on his car trunk.

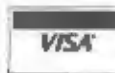
PRODUCT REVIEW—HEATHKIT HK 232 MULTI-MODE TNC

The HK-232 is an electrical clone of the popular PK-232 marketed by AEA (Advanced Electronics Applications). In fact the manual states the specifications apply to both rigs. The HK-232 is a multimode converter and controller that interfaces a computer or a terminal to an HF or VHF amateur transceiver. On the radio side of the interface, the HK-232 sends and receives Morse, Baudot and ASCII RTTY, facsimile, AMTOR/SITOR and packet signals. An AFSK modem handles most data transfers, while a CW keyer permits on/off signals. It interfaces with your computer through a standard RS-232C serial port.

The HK-232 has numerous hardware and software features. They include internal jumpers to configure the unit to transmitters with both positive and negative keying, select between internal and external modems, and enable battery back-up. The unit has special editing and debugging circuits and internal RAM and ROM memory. Rear panel connectors provide for interfacing the unit to two different transceivers. (No more unplugging cables to change radios) There is also provision for a scope output to monitor tuning. One unique feature I like is a special software command that will tell you what kind of signal you are receiving and switch the radio to that mode! It even tells you what percent it believes it is accurate to! The front panel has a myriad of LEDs that tell you more than you probably want to know.

The kit was a typical Heath product that included exceptional documentation and extensive assembly manual. The even included a diagram of popular radios to help you hook it up. Another super feature is circuit board X-ray views from both sides to help in any needed troubleshooting. All parts were well packed and identified, small components were on tape in the order of assembly. Most parts are on a single circuit board with only the front panel display on a separate board. The interconnection wiring was minimal. The kit was not difficult to assemble but with the extensive use of CMOS chips you had to be very careful with static. Also a low wattage soldering pencil is a must. The kit took me about 10 hours to complete and the alignment only 30 Minutes!! All alignment is done on the computer from internally programmed routines. A VOM and a scope is helpful but not required.

Bottom line is: I like this kit! It offers more than the PK-232 in that when you are done you have some real understanding of how the circuits work and will have a good shot at making any future repairs or mods yourself. And last but not least at \$279 it saves you enough to buy the popular PK software which works 100% with the Heath unit. Ron NK6P



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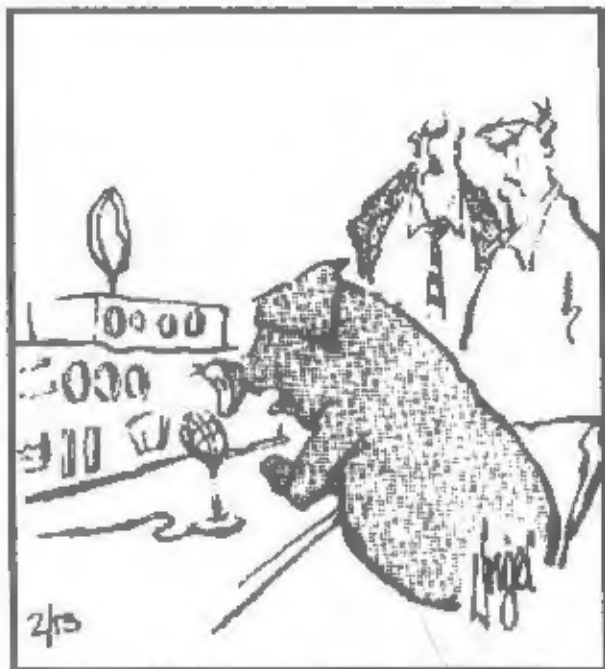
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HERMAN

By Jim Hager



"You never seen a ham
operator before?"

NO CODE - WHY NOT?

While attending a Hamfest recently in Denver there was an announcement about someone having a petition to oppose a "no code" license. While I am not surprised that some hams are still against a no code license, I believe it is time we give it more serious consideration.

I know this is an emotional issue which Hams have debated many times before, but as they say, "The times, they are a chang'ing." We must consider why we have always supported the code requirement. Early on, the requirement was fairly obvious. The only way to get on the air was to use morse code. Even after other forms of modulation came along, CW was still an easy route to get on the air. Another thing we should consider is that Hams were given many of the frequencies we now occupy because the so called experts thought them to be unusable at the time. Hams, because of their inquisitiveness and inventiveness were able to make use of these high frequencies.

Today available frequency space is at a premium and as we know so well, we can easily lose some of the valuable space we have. We need more Hams to occupy the VHF - UHF - Microwave spectrum that has been allotted to us. To me, a good way to do this is to get more young people interested in Ham radio. I believe if we can get more young people into Ham radio it would not only save our hobby, it may save our electronic industry. Take a look at where the majority of electronic equipment is made today. Yes, Japan has a huge labor market and it has lower labor costs than we do. It also has a trained pool of scientists, engineers and technicians that we do not have. We need to get our young people interested in the high tech fields. Ham Radio has the potential to do this, but the requirement to learn morse code keeps them away.

I do not advocate abolishing all requirements for the code. We should have a limited license available for those who want to get on the air to experiment with new techniques. Some of these folks will find Ham Radio so interesting they will take the time to learn the code and upgrade. Some will remain with the experimenter class and continue to contribute to Ham Radio in that fashion. I admit that I held a Technician license for 11 years before I upgraded to Advanced. I feel that I contributed to Ham Radio during that time and I suspect that the same thing has happened to many others. It certainly doesn't take a knowledge of CW to design a packet radio station or a satellite antenna. Why do we continue to think we are helping Ham radio by keeping the code requirement? The CW requirement does not filter out the "riff raff" as some would have us believe. Passing the CW exam doesn't make anyone a better operator either. No one tested us on our speaking ability, yet every license class today has phone privileges!

Continued on Page 8

Update: El Paso County Tower Ordinance

On February 21st about 80 amateurs from throughout the county met with the County Planning Commission for hearings on the proposed tower ordinance. Several people made presentations to the commission regarding the two major provisions of the ordinance which are opposed by the amateur radio community.

The group was successful in getting the commission to adopt a different "grandfathering" provision in the ordinance. The new version would give those amateurs with tower height variances, but who have not yet erected the towers, ten years from the date of enactment of the new ordinance to get the towers up and use the variances where granted. All legal towers now up would be "grandfathered" under the new ordinance.

However, the group was not successful in their efforts to persuade the commission to delete the so-called "one-half mile limit" from the new ordinance. This part of the new ordinance forces tower owners into the more restrictive provisions of the ordinance and a requirement for a special use permit, if the tower they propose is within one-half mile of another tower already erected that exceeds the structural height limits of the zone. In effect, it limits the height of a tower one can erect without a special use permit, if the second tower is within one-half mile of an existing tower.

The proposed tower ordinance, which contains the modified "grand fathering" clause and the "one-half mile rule," was approved by the County Planning Commission and will be sent to the Board of County Commissioners for final action. The ordinance does not become law until approved by the County Commission. The County Commission may still change the proposed ordinance, if they choose, before final action on it.

The date of presentation of the new tower ordinance to the County Commission is uncertain at this time. It appears that it will take place sometime in April. We need to have a large turnout again when the County Commissioners hear the proposed ordinance. Also please don't hesitate to write letters or contact the commissioners personally to make your views on the ordinance known.

The tower committee appreciates all the time, money and effort that amateurs in the county have put forth to defend their tower interests. The appearance of over 80 people at the Planning Commission hearing certainly helped us to make our point of view known. The tower committee will spread via a not in 0-Beat and announcements on the 146.970 repeater when we learn when the new proposed tower ordinances will be presented to the County Commissioners.

Hal, W9MXV - 2/25/89

Severe Weather Training Reminder...

This is a reminder that the first of two severe weather training sessions for radio amateurs will be conducted by Herb Moore of the National Weather Service on Sunday, March 12, beginning at 1pm, in the Civil Defense room in the basement of the Colorado Springs Police Department headquarters on Kiowa Street in downtown Colorado Springs.

During a severe weather net, the weather service will only act on reports from properly trained weather spotters due to the critical nature of the information. This session will teach some of the basics of weather spotting and give an overall picture of the needs of the weather service. Any amateur with a Technician or higher class license who has never been to one of Herb's sessions is encouraged to attend this class.

The second session is an advanced class for those who have attended a prior training session. This class will be held in the same location on April 16 beginning at 1pm.

For further information on either of these classes, please contact me weekdays at 548-2045, evenings and weekends at 260-1318.

Dave Banks, N4ION,

AMATEUR RADIO LICENSE EXAMINATIONS

WHEN: Sat, 13 May 89 at 9:00 AM
WHERE: First United Methodist Church
420 North Nevada Avenue
Colorado Springs, CO
WALKINS: Allowed
TALK-IN: 146.37/97

REQUIREMENTS

1. Original FCC license, if any
2. A copy of your FCC license, if any
3. Two forms of positive identification (driver's license, birth certificate, passport or library card)
4. \$4.75 check or M.O. payable to ARRL/VEC
5. Completed FCC form 610
6. If physically handicapped, a physician's certificate describing the nature of the disability. Arrangements should be made prior to testing

Sponsored by: **PIKES PEAK RADIO
AMATEUR ASSOCIATION**

For more information contact:
Max Stafford 488-9289

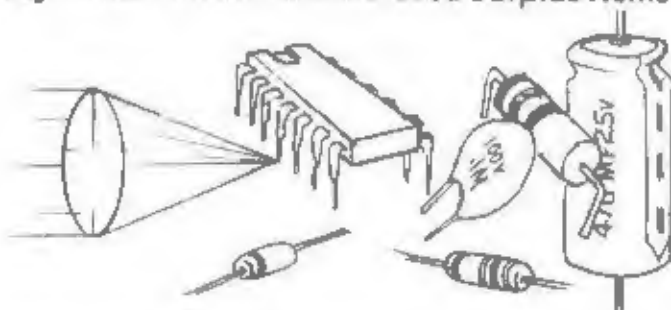
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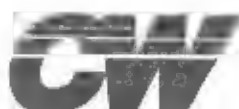
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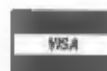
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FUN WEEK END PROJECTS BY KD0SO

Continued from the month of January

O.K. EIA RS232C Mechanical standards specify:

1. Assignment of signals to connector pins.
2. Female pins in the DCE connector
3. Male Pins in the DTE connector
4. Maximum cable length is to be 50 feet. (you can cheat here with heavier wire for example, use #18 or #16) with #16 you can reach a 125 feet easily
5. Maximum cable capacitance of 2500 picofarads.

RS 232C is usually referred to as a "SERIAL" port. Voltages on these ports can vary so be careful to use a little common sense here. The maximum levels are usually not more than 25 Volts DC. If you are using a normal 12 Volt DC System, as most Amateurs do, you shouldn't have any problem. Computers use 12 Volt signaling and so does the garden variety of Amateur terminal equipment. So no sweat. You really should not have a problem. Just be sure you read up on that old clunker stuff first, before you attempt to do an interface. With something like 28 teletype. There are neat problems like current loop requirements to consider here.

On the voltages there is a thing called transition region, that's where a signal is neither a mark or space. This usually occurs between zero and plus three and minus three volts. So if your signal falls into this region when it should be a high, say plus 12 volts, chances are you have a bad connection or a short has occurred. Worst case is an non-compatible situation, wherein the equipment is loaded down the line. But, look for the first two situations first. If all else fails read the instructions peculiar to your terminal equipment.

All right lets make those connections, for that interface cable, to the connectors. Equipment ground is Pin 1 to Pin 1. (In most cases this is not done). But for safety sake, I mention it. We are going to be working with pins one through seven and pin 20, only. True enough you can do it with only four pins hooked up, and the rest on the terminal grounded, but I won't teach that to you in this article and most important of all do it right the first time and preclude voiding the manufacturers warranty. Ok, continuing on with pin 2 DTE "Transmit Data" to pin 3 DCE. Next is pin 4 DTE to DCE pin specified. Then pin 5 DCE to DTE pin specified. Now pin 6 DTE goes to pin 20 DCE. Finally pin 7 to pin 7. In some cases DTR and DSR are jumpered together and are not physically connected to other equipment. Unless you bought a pig in a poke, No manual, you should always refer to the manual for your wiring guide. The manufacture knows what the equipment needs. If you cross up the wires don't be to concerned. Your first indication will be, it don't work. Always check the inter face cable by use of an ohm meter or a light test. A mistake will not cause the equipment to die, in most cases. Take your

time, when wiring these cables and double check all your work first, the results will be, it works first shot out of the bag.

Now for those who never get it right. Most OEM's, will have interface cables of an infinite variety, so ask first, if you want to do it the easy way. Hope this helps to shed some light on the world of RS 232 C "SERIAL" port connections.

73's Paul KD0SO....

NO CODE - Continued from Part A

I propose a straw vote to see what you think. My propositions are:

YES - I support a No Code license with limited privileges.

NO - I do not support a No Code license.

If you want to participate please send a postcard voting either YES or NO to:

Rick Brown KD0SU
3249 Squaw Valley Dr.
Colorado Springs, CO 80918

I will compile the results and submit them for the next issue of Q - Beat.

DITS & BITS

FORSALE

Kenwood ST-1 Desk Charger/Stand for 2400 Walkie. Call Harvey @ 599-7070

FORSALE

Kenwood TH215A HT with expanded transmitter, 2 extra battery packs, rapid charger and speaker mike, all like new, asking \$500.00. Call George, N8CIX @ 687-2610

FORSALE

KLM 1&C circularly polarized antenna for 430-450 Mhz. Used mainly for satellite communications, but does well on terrestrial comms. Sell for \$50.00. Call Keith NY6T @ 637-1525 or leave message on BBS @ 637-1375

HAM INSIDE OF THE HAM

OR

WHY EIGHT CONNECTIONS FOR TWO DIRECTIONS

W1JU

I've always wondered why there are so many connections between the control box and the rotor. During a recent encounter with my HAM II, I found out via a rude awakening.

I found my rotor becoming very sluggish and finally coming to a complete, inoperable halt. Since it was a second hand unit, purchased in New England at a hamfest in 1979, I decided to do a little exploratory surgery. I opened the rotor bell, removed, cleaned and lubed all the gears. Before reinstalling the rotor on the tower, I figured a bench test would be a good idea. I connected the three wires between the box and rotor to run the motor. The rotor would still not turn. I figured I must have a bad motor, and just to make sure, put it on NEOP's rotor box, in case I might have had a bad box instead of rotor. Same result, the motor would not turn. I ordered a new motor, and when it arrived I hooked up the three wires for the motor. SAME RESULT - THE MOTOR WOULD NOT TURN.

The next day while day dreaming about this predicament I had a BFO (Blinding Flash of the Obvious). The Alternating Current starting capacitor is located in the control box, and is connected across the motor terminals via leads 4 and 8. Since I was only connecting three leads, the capacitor was sitting there unused. After including the capacitor in the hookup, everything worked fine. Therefore, the only purpose for leads 4 and 8 are to hook up the capacitor across the motor.

Someone asked, during troubleshooting conversations on 146.52, why the manufacturer didn't put the capacitor in the bell housing. The reason is the manufacturer recommends replacement of the AC starting capacitor once per year. Guess they're saving you from pulling the rotor out from under the beam, and having the TH-6 look like it's being used for moonbounce at 14 MHz, as mine did for a week or two.

Harvey W1JU

Rocky Mountain Amateur & Shortwave Specialist

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MINUTES OF FEB GENERAL MEETING

submitted by Al NOCMW, secretary

The general meeting of the Pikes Peak Radio Amateur Association was held at the Hewlett-Packard Briargate Facility, Wednesday evening 08 Feb 1988. The meeting was called to order by the president Keith NY0T at 19:00, and followed by the introduction of members and guests.

The minutes of the previous General Meeting and Board meeting were approved as printed in Q-Beat.

Committee Reports

Note: Anyone wishing to help out on any of these committees, please contact the chairman at the phone number listed. Thank you for your support.

Treasurer - Ron NK0P (593-8352):

Previous balance was \$1174.60, income of \$0751.89, expenses of \$0903.21, leaving a balance \$0920.19.

Interference - Ron NK0P (593-8352):

Nothing to report this time.

Education - Dave N4DIS (531-0633):

Looking to start Novice classes in early March.

Publicity - Karen N1FED (495-0091):

A flyer promoting the swapfest and giving general information about the Club is now being formulated. This will be sent out about a month before the swapfest.

Colorado Council of Amateur Radio

Clubs (CCARC) - Oak K0ROL (591-1426):

The next meeting will be in March.

Deaf and Blind School - Jim WA9ABB:

(598-7543):

Have one student who is very close to passing her Novice test. She has passed the code test and is now working on the theory.

Q-Beat - Keith NY0T (637-1525):

Keith put out a call for a new editor to take over in the Jun timeframe as he is being transferred by the military.

ARES - Mallory N0KF (591-0049):

Dave N0ION reported on behalf of Cliff that the ARES net now meets at 18:30 each Wednesday evening. He also stated that Cliff is the new ARES representative for district 14. KA0WIE now has a ARES section on his PBBS.

Public Service - Mike K0TER (636-1290):

Mike will have a sign up sheet for the Walk for Mankind (scheduled for April) at the next meeting. There will also be a Volk smarch at the Air Force Academy that will need Club support as well.

VE Testing - Max KD0EL (488-9289):

The next VE testing is scheduled for 13 May 89 at the 1st Method 1st church at St. Vrain and Nevada. Cost is now \$4.75. Max also stated that the church is now charging for the PPRAA to hold their examination sessions there. He is investigating other places to have the VE testing.

Old Business:

Nothing in Old Business.

New Business:

It was reemphasized that the PPRAA will have it monthly meeting at 19:00 instead of 19:30 as in the past. This will permit the guest speakers a much longer time to address the club if required.

The guest speaker for the next club meeting will be General Royer from the Air Force Academy who will speak on Over the Horizon Backscatter Radar.



COLORADO COMM CENTER





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Dave NØION reported on severe weather classes that will take place in March and April. For more info please contact him at 260-1318.

Mike KØTER, the custodian for club assets, stated that another place will be required to store club equipment as he will be needing that space for other

Max KDØEL volunteered to head up the field day operation again this year.

The club picnic will again be held in August and a volunteer will be needed to head up this effort. It will be necessary to reserve the Picnic Area at AFA for this purpose.

Doc WØMCT reported that the Teller County Hill Climb will be on June 11 and 12 this year.

Lauren KXØO gave a talk on the El Paso County Tower Issue, and urged everyone to be at Centennial Hall on 21 Feb 89.

The next Board meeting will be at the QTH of Keith NYØT on 13 Feb 89.

Prizes - Rick WB7THT:

All prizes were mystery prizes.

Winners were:

KBØDPH-Mike-Clock

NØLA-Pete-Speaker

KEØPA-Roger-Balun

KEØOW-Roxy-Mystery Prize

NKØP-Ron- Breakfast at Village Inn

Program:

The Feb program was furnished by E.T.O., the manufacturer of the Alpha line linear amplifiers. The main speaker was Ray Heston N1ØG who was assisted by John Cunliffe DB3RC/WØ. Ray gave an indepth rundown on how the amplifier is built and also talked about plans for building a VHF series of amplifiers. Interest is sufficient from the amateur community. It was an excellent presentation and the PPRAA would like to thank Ray and John for their support.

The meeting was adjourned at 2130.

The next meeting will be 08 Feb 89.

Minutes of the FEB Board Meeting

submitted by AI NØCMW

The February Board meeting of the PPRAA was held at the QTH of Keith NYØT on 13 Feb 89. In attendance were AI NØCMW, BDale N3EUA, Karen N1FED, Keith NYØT, Bud NØDDF and Ron NKØP.

It was decided to check out the condition of some of the club property. This will be done by AI NØCMW and Mike KØTER.

It was decided not to put out a separate mailing to promote the Club, but rather to dedicate pages of *Ø-Beat* for this and to publish extra copies of *Ø-Beat* that will be sent to all Colo Spgs Hama.

The club decided on a policy on how to handle those individuals who submit bad checks when paying their dues.

BDale N3EUA will be canvassing club members shortly to determine if there will be any interest in purchasing coffee mugs with the club logo on it.

There being no further business, the meeting adjourned at 2015.

The next Board meeting will be at the QTH of Ron NKØP.

AFA RADIO CLUB

MINUTES

The AFA Radio Club meeting was held 14 Feb 1989 at 1130 hrs at the rec center lunch area. Present were Floyd KB5FCN, Faylene KB5FTN, Doug NØHJT, AI NØCMW, Jim WA9ABB and Ron NKØP. It was decided to have the Club meetings on the Tuesday prior to the PPRAA meetings. There will be a Volksmarch on 6 & 7 May and Mike KØTER will be contacted to solicit PPRAA support. Jim WA9ABB reported that there is \$42.00 in the Club Treasury. He also stated that he is retiring in August and will be moving to Troy, Ohio. There being no further business, the meeting was adjourned. The next meeting will be Tuesday March 7, 1989. The club is open to all military active and retired and civilians working at the academy. Submitted by AI NØCMW.

MILEY'S RADIO

Jess KOTAA 719 W. 7th St. Florence, Colorado 81226 (719) 784-3040
Hours 9 to 6 Tuesday through Friday — Saturdays 9 to 1 — Evening Hours 7:30 to 10 Tues., Wed., Thurs. (Call Ahead)
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Closed except by pre-arranged phone appointment March 1 — April 15
If you come without calling first, we may be gone —

ALL NEW RIGS IN STOCK!

Hamfest Schedule:

3/17, 18, 19	Midland, TX
4/1, 2	Mooreland, OK
4/28, 29, 30	Bean Feed, Las Cruces, NM
5/6, 7	Sierra Vista, AZ
5/20	Colorado Springs, CO
5/28	Gateway parking lot Denver???
6/3	Grand Junction, CO???
6/10	Loveland, CO
6/17, 18 or 6/24, 25	Maybe??? Enid, OK
7/8, 9	Cheyenne, WY
7/15, 16	East Glacier, MT
7/22, 23	Woodland Park, CO
7/30	RMRL — Jeffco Fairgrounds, Denver

Used Rigs:

Kenwood TS 180S \$425.
Kenwood TV 502 2 meter transverter for TS 520 and 820 \$125.
Kenwood TS 520S 80-10 meter like new - 7 hrs. operation, then stored \$450.
Yaesu FV 901DM Scanning VFO w/Memory for 901/101ZD \$150.
Yaesu SP901P Speaker/Patch \$50.
Yaesu FT101ZD non WARC \$475.
Johnson kilowatt Matchbox with coupler and bridge \$150.
Uniden HR2510 - modified \$200.
Kenwood TM2570 \$425.
Kenwood TH41AT with tone/HD battery and charger \$150.
Kenwood TM2570 \$425.
Kenwood TH41AT with tone/HD battery and charger - \$150.
Kenwood TS 7005P digital \$275.
Yaesu FT620B 6 meter 5SB \$250.

Lots more used and consignment equipment.

73's — Jess

3/89

Membership Application

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PPRAA is not associated with the Pikes Peak FM Association.